

Amendments to the claims (this listing replaces all prior versions):

1. (canceled).
2. (currently amended) A vehicle suspension system in accordance with claim [[1]] 6, wherein said profile storage device is located remotely from said surface vehicle.
3. (currently amended) A vehicle suspension system in accordance with claim [[1]] 6, wherein said profile retrieving microprocessor is located remotely from said surface vehicle.
4. (currently amended) A vehicle suspension system in accordance with claim [[1]] 6 and further comprising[[,]]  
  
a locator system, coupled to said microprocessor for determining the location of said surface vehicle[[,]].  
  
~~wherein said microprocessor is adapted to determine if there is stored in said profile storage device a profile corresponding to said location.~~
5. (canceled).
6. (currently amended) A vehicle suspension system ~~in accordance with claim 5~~, for a surface vehicle having a payload compartment and a surface engaging device, comprising:  
  
a sensor for acquiring vertical deflection data  
  
a controllable suspension element for applying a force between said payload compartment and said surface engaging device;

and

a microprocessor to compare said acquired vertical deflection data with stored profiles of vertical deflection data and to control said controllable suspension element based one of said stored profiles that corresponds to a path along which said vehicle is traveling.

7. (currently amended) A vehicle suspension ~~system in accordance with claim 5,~~ for a surface vehicle having a payload compartment and a surface engaging device,  
comprising:

a sensor for acquiring vertical deflection data

a controllable suspension element for applying a force between said payload compartment and said surface engaging device;

a profile storage device for storing a plurality of profiles of paths,

said profiles including vertical deflection data; and

a profile retrieving microprocessor coupled to said controllable suspension element and to said profile storage device for retrieving from said profile storage device one of said profiles,

said one profile corresponding to the path on which said vehicle is traveling wherein said microprocessor is adapted to modify said profile and to store said modified profile in said profile storage device.

8. (currently amended) A vehicle suspension system in accordance with claim [[1]] 6 and further comprising,

a trajectory plan developing microprocessor for developing a trajectory plan corresponding to said retrieved profile.

9. (original) A vehicle suspension system in accordance with claim 8 and further comprising,

a control processor for issuing command signals to said controllable suspension element to execute said trajectory plan.

- 10-19. (canceled).

20. (currently amended) An active suspension system for a surface vehicle for operating on a path, comprising,

an active suspension;

a profile sensor for sensing a profile of said path;

a road profile storage device for storing a database of path profiles; and

a path profile microprocessor coupled to said storage device and to said profile sensor for comparing said sensed profile with said database of path profiles.

21. (original) An active suspension system in accordance with claim 20,

wherein said road profile storage device is located remotely from said surface vehicle.

22. (original) An active suspension system in accordance with claim 20,

wherein said road profile microprocessor is located remotely from said surface vehicle.

23. (original) An active suspension system in accordance with claim 20 and further comprising,

a trajectory plan storage device for storing a database of trajectory plans, said trajectory plans corresponding to said road profiles;

a trajectory plan microprocessor coupled to said storage device and to said road profile microprocessor and responsive to said road profile microprocessor for retrieving one of said trajectory plans and for communicating instruction signals based on said one of said trajectories to said active suspension.

24. (original) An active suspension system in accordance with claim 23, wherein said trajectory plan storage device is located remotely from said surface vehicle.

25. (original) An active suspension system in accordance with claim 23, wherein said trajectory plan microprocessor is located remotely from said surface vehicle.

26. (original) An active suspension system in accordance with claim 20 and further comprising,

a trajectory plan development microprocessor coupled to said active suspension for developing a vertical trajectory plan for said sensed profile.

- 27-67. (canceled).

68. (currently amended) A method for operating a vehicle on a road segment including vertical disturbances, said vehicle comprising a payload compartment, a road engaging device, a controllable suspension element and sensors, associated with said controllable suspension element, for sensing at least one of vertical acceleration, vertical velocity, and vertical displacement, said method comprising:

providing data representative of a one of said vertical disturbances; and

issuing a command to said controllable vehicle suspension to exert a force related to said one vertical disturbance before said road engaging device encounters said vertical disturbance.

69. (original) A method for operating a vehicle in accordance with claim 68, wherein said providing comprises:

driving said vehicle over said road segment; and

recording data from said sensors.

70. (original) A method for operating a vehicle in accordance with claim 69, further comprising smoothing the data to provide a trajectory plan, and wherein said issuing includes issuing commands that cause said controllable suspension to cause said payload to follow said trajectory plan.

71. (original) A method for operating a vehicle in accordance with claim 68, wherein said providing comprises retrieving a profile from a library of profiles.

72-78. (canceled).

79. (new) A method comprising:

driving a car over a section of road;

acquiring vertical deflection data of a surface of the road; and

comparing said acquired vertical deflection data with stored profiles that include vertical deflection data of paths.

80. (new) A method in accordance with claim 79, also including storing said profiles remotely from said surface vehicle.
81. (new) A method in accordance with claim 79 and further comprising:  
  
determining a location of the vehicle and wherein  
  
the comparing comprises comparing the acquired vertical deflection data with a one of said profiles that corresponds to the location.
82. (new) A method in accordance with claim 79 and further comprising developing a trajectory plan corresponding to the profile (no antecedent and unclear what it means).
83. (new) A method comprising:  
  
operating a vehicle on a road surface;  
  
sensing vertical deflection data of said road surface;  
  
retrieving a profile of vertical deflection data of a path, the profile belonging to a set of profiles, said retrieved profile corresponding to a path on which said vehicle is traveling, and  
  
responsive to said sensed vertical deflection data, modifying said retrieved profile.